

Claims

1. Method of producing a cationic liposomal preparation comprising a camptothecin drug in its carboxylate form, comprising the steps of
 - (a) providing cationic liposomes in an aqueous medium comprising the components
 - (i) at least one cationic lipid and optionally at least one amphiphile,
 - (ii) a camptothecin drug in its carboxylate form and
 - (iii) a cryoprotectant,
 - (b) optionally homogenizing the liposomes of step a) at least once,
 - (c) optionally sterile filtrating the liposomes of step a) or b),
 - (d) dehydrating the liposomes of step a) b) or c) and
 - (e) reconstituting the dehydrated liposomes of step d) in an aqueous medium,wherein said aqueous medium of step a) and/or of step e) comprises a pH active agent in a concentration of about 0 mM to about 10 mM and has a pH between about 5 and about 9, preferably between about 6 and about 8.
2. The method of claim 1, wherein said cationic lipid is present in an amount of at least about 30 mol% based on the amount of total lipids of the cationic liposomes.
3. The method of claim 1 or 2, wherein said cationic lipid comprises a positively charged group which is a tertiary amino or quaternary ammonium group such as N-[1-(2,3-diacyloxy)propyl]-N,N-dimethylamine or N-[1-(2,3-diacyloxy)propyl]-N,N,N-trimethyl ammonium, preferably 1,2-dioleoyl-3-trimethylammoniumpropane (DOTAP) or 1,2-dioleoyl-3-dimethylammoniumpropane (DODAP).
4. The method of any one of the claims 1 to 3, wherein said amphiphile is present in an amount of up to about 70 mol% based on the amount of total lipids of the cationic liposomes.

5. The method of any one of the claims 1 to 4, wherein said amphiphile is non-cationic and preferably selected from sterols such as cholesterol, from phospholipids, lysolipids, lysophospholipids, sphingolipids or
5 pegylated lipids and combinations thereof, preferably diacylphosphatidylcholine.
6. The method of any one of the claims 1 to 5, wherein said camptothecin carboxylate drug is present in an amount of at least about 0.1 mol% to
10 up to about 100 mol%, preferably less than about 50 mol% with respect to the amount of total lipids.
7. The method of any one of the claims 1 to 6, wherein said pH active agent is selected from Tris, Hepes, Bis, phosphate, carbonate or amino
15 acids, optionally together with a base or an acid such as NaOH or HCl.
8. The method of any one of the claims 1 to 7, wherein said stabilizing agent is present during at least one of the steps a) to e), and which is preferably an antioxidant and more preferably selected from alpha-
20 tocopherol or vitamin C.
9. The method of any one of the claims 1 to 8, wherein at least one of the steps, preferably all of the steps a) to e) are performed under protection from light.
10. A cationic liposomal preparation comprising a camptothecin drug in its carboxylate form and a pH active agent of up to about 10 mM in an aqueous medium, wherein said medium has a pH between about 5 and about 9, preferably between about 6 and about 8.
11. A cationic liposomal preparation obtainable by a process of any one of the claims 1 to 9.

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12. A pharmaceutical composition comprising a liposomal preparation of claims 10 or 11, optionally together with a pharmaceutically acceptable carrier, diluent and/or adjuvant.
- 5 13. Use of the liposomal preparation of claims 10 or 11 or a pharmaceutical composition of claim 12 for the manufacture of a medicament for an angiogenesis-associated disease.